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29 JAN 2002

Receipt  
PCT

*Witz*

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE PATENT APPLICATION:

Usama Fayyad et al.

Serial No.: 09/700,606

Group Art Unit: 2121

TC 2100 CSO  
STATUS INQUIRY  
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Filed: January 31, 2001

Examiner: Not yet assigned

MAR 14 2002

Title: SCALABLE SYSTEMS FOR CLUSTERING OF  
LARGE DATABASES HAVING MIXED ATTRIBUTES

Initials:

Docket No.: 14-694 - 4254

Watts, Hoffmann, Fisher  
& Heinke Co., L.P.A.  
1100 Superior Ave., Ste. 1750  
Cleveland, OH 44114  
(216) 241-6700 - telephone  
(216) 241-8151 - facsimile

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MAR 14 2002

Technology Center 2100

Assistant Commissioner for Patents  
Office of Initial Patent Examination's  
Customer Service Center  
Washington, D. C. 20231

STATUS REQUEST REGARDING CORRECTED FILING RECEIPT

Dear Sir:

A request for a corrected filing receipt was filed in the U.S. Patent Office on June 1, 2001, a copy of the submitted documents are enclosed. It is respectfully requested that the Patent and Trademark Office indicate when it will issue a corrected filing receipt.

Respectfully submitted,

*Stephen Schultz*

Stephen J. Schultz  
Reg. No. 29,108

Date Jan 7, 2002

I hereby certify that this copy of the document was deposited with the U.S. Postal Service as First Class Mail addressed to the Assistant Commissioner of Patents, Washington, D. C. 20231

on 1/7/02  
by Karen Buzinski

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PATENT APPLICATION

Applicant(s): Lissma Dwyer et al  
Title: Scrapie agent  
Serial No.: 09/199,000  
Mailing Date: 6/1/01  
Filed: 11/31/01  
Initials: MS

Attorney Docket No.: 14-694  
Client: MS

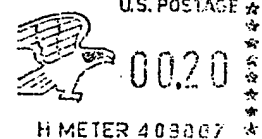
Patent No.: 7,301,000  
Date of Patent: JUN 04 2001

Receipt is hereby acknowledged of the following:

<input type="checkbox"/> Transmittal (____ pages)	<input type="checkbox"/> Assignment(s) (____ pages)
<input type="checkbox"/> Provisional Application for Patent Cover Sheet	<input type="checkbox"/> Assignment Cover Sheet(s) (____ pages)
<input type="checkbox"/> Request for Filing a Patent Application under 37 CFR 1.53 (b) (____ pages)	<input type="checkbox"/> Small Entity Statement (____ pages)
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☒ Request for Correction of Filing Receipt app  
and attachments

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WATTS, HOFFMANN, FISHER  
& HEINKE Co., L.P.A.  
SUITE 1750  
1100 SUPERIOR AVENUE  
CLEVELAND, OHIO 44114-2518

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**PATENT  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION: Usama Fayyad et al.

Serial No. 09/700,606

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Title: SCALABLE SYSTEM FOR CLUSTERING OF LARGE DATABASES HAVING MIXED ATTRIBUTES

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1100 Superior Avenue, Ste. 1750  
Cleveland, Ohio 44114

Assistant Commissioner for Patents  
Office of Initial Patent Examination's  
Customer Service Center  
Washington, D.C. 20231

**REQUEST FOR CORRECTED FILING RECEIPT**

Sir:

As evidenced by the enclosed copy of page one of the specification, specifically, the first two paragraphs which have been highlighted for your convenience, and the enclosed copy of the Declaration and Power of Attorney, the correct domestic priority data as claimed by applicant should read as follows:

THIS APPLICATION IS A 371 OF PCT/US99/06717 03/29/1999

WHICH IS A CIP OF 09/083,906 05/22/1998

WHICH CLAIMS BENEFIT OF 60/086,410 05/22/1998

I hereby certify that the paper is true, deposited with the  
U. S. Postal Service as 1st Class Mail addressed to the  
Assistant Commissioner of Patents, Washington, D. C. 20231

DO

By: Maren Burghardt

A copy of the original filing receipt is enclosed which shows the necessary corrections. A corrected filing receipt is respectfully requested.

Respectfully submitted,

Date: June 1, 2001

Stephen S. Schultz

Stephen S. Schultz  
Reg. No. 29,108

Telephone: 216-241-6700  
Facsimile: 216-241-8151



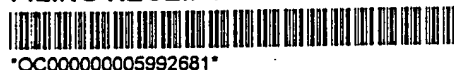
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COMMISSIONER FOR PATENTS  
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WASHINGTON, D.C. 20231  
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/700,606	01/31/2001	2121	1152	14-694-4254	8	34	4

CONFIRMATION NO. 8142

## FILING RECEIPT



\*OC000000005992681\*

Watts Hoffman Fisher & Heinke Company  
Suite 1750  
1100 Superior Avenue  
Cleveland, OH 44114-2518

APR 27 2001

Date Mailed: 04/24/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Usama Fayyad, Mercer Island, WA;  
Paul S. Bradley, Seattle, WA;  
Cory A. Reina, Kirkland, WA;

## Domestic Priority data as claimed by applicant

THIS APPLICATION IS A 371 OF PCT/US99/06717 03/29/1999  
WHICH IS A CIP OF 60/083,906 05/01/1998  
WHICH CLAIMS BENEFIT OF 60/086,410 05/22/1998

## Foreign Applications

Projected Publication Date: N/A

Non-Publication Request: No

Early Publication Request: No

## Title

Scalable system for clustering of large databases having mixed data attributes

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09/083,906

05/22/98

• Preliminary Class  
700

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Data entry by : NGUYEN, SON

Team : OIPE

Date: 04/24/2001



# A Scalable System for Clustering of Large Databases Having Mixed Data Attributes

## Cross Reference to Related Applications

5 The present invention is a continuation in part of co-pending United States patent application serial number 09/083,906 entitled "A Scalable System for Expectation Maximization Clustering of Large Databases" to Fayyad et al having a filing date of May 22, 1998, and which is assigned to the assignee of the present application and is incorporated herein by reference.

10 Priority is claimed from provisional United States patent application serial number 60/086,410 filed May 22, 1998.

## Field of the Invention

15 The present invention concerns database analysis and more particularly concerns an apparatus and method for clustering of data into groups that capture important regularities and characteristics of the data.

## Background Art

20 Large data sets are now commonly used in most business organizations. In fact, so much data has been gathered that asking even a simple question about the data has become a challenge. The modern information revolution is creating huge data stores which, instead of offering increased productivity and new opportunities, can overwhelm the users with a flood of information. Tapping into large databases for even simple browsing can result in a return of irrelevant and unimportant facts. Even people who do not 'own' large databases face the overload problem when accessing  
25 databases on the Internet. A large challenge now facing the database community is how to sift through these databases to find useful information.

Existing database management systems (DBMS) perform the steps of reliably storing data and retrieving the data using a data access language, typically SQL. One major use of database technology is to help individuals and organizations make  
30 decisions and generate reports based on the data contained in the database.

An important class of problems in the areas of *decision support* and *reporting* are clustering (segmentation) problems where one is interested in finding groupings (clusters) in the data. Data clustering has been used in statistics, pattern recognition,

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